

Serial No. 09/725,309

PATENT APPLICATION

Navy Case No.: 79,212

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

- 1-2. (cancelled)
3. (previously presented) A method for stabilizing a thioesterase comprising:
genetically engineering the thioesterase to include one or more terminal histidine
residues;
copolymerizing an amphiphile containing a salt selected from the group consisting of
metal salts of iminodiacetic acid, nitrilotriacetic acid, and mixtures thereof with
other polymerizable amphiphiles to form vesicles; and
binding the genetically engineered thioesterase to the salts on the outer surface of the
vesicles.
4. (original) The method according to claim 3 wherein the metal salts are selected from the
group consisting of copper, nickel, cobalt, and zinc salts.
- 5-6. (cancelled)
7. (original) The method according to claim 3 wherein the salt is a metal salt of
iminodiacetic acid.
8. (original) The method according to claim 3 wherein the salt is a metal salt of
nitrilotriacetic acid.
- 9-14. (canceled)
15. (original) The method of claim 3 wherein the bound enzyme is capable of detoxifying a
nerve agent.
- 16-23. (canceled)

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24. (previously presented) The method of claim 3, wherein the enzyme includes a terminal polyhistidine chain.
25. (previously presented) The method of claim 3, wherein the bound genetically engineering thioesterase is catalytically active.
26. (canceled)
27. (new) The method of claim 3, further comprising the step of contacting the bound thioesterase with a sample suspected of containing a contaminant.
- 28-29. (canceled)